ELECTRONIC APPARATUS AND METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 62/220,720, filed Sep. 18, 2015, the entire contents of which are incorporated herein by reference.

FIELD

[0002] Embodiments described herein relate generally to an electronic apparatus and a method.

BACKGROUND

[0003] Recently, electronic apparatuses called wearable devices, which can be worn and used by the user, have been developed.

[0004] Various forms of such wearable devices have been developed, and a wearable device mounted on the user's head and used is well known as, an eyeglasses-type wearable device.

[0005] Such an eyeglasses-type wearable device includes a processor such as a CPU. Various types of software including, for example, an operating system (OS) can be executed on the eyeglasses-type wearable device.

[0006] It is assumed here that the OS based on an input operation using, for example, a mouse or a touchpad is executed on the eyeglasses-type wearable device. In this case, accepting an operation equal to the input operation on the eyeglasses-type wearable device (i.e., executing the operation for the device) is difficult, and an input error may occur.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] A general architecture that implements the various features of the embodiments will now be described with reference to the drawings. The drawings and the associated descriptions are provided to illustrate the embodiments and not to limit the scope of the invention.

[0008] FIG. **1** is an illustration for explaining an example of an appearance of an electronic apparatus of an embodiment.

[0009] FIG. **2** is an illustration showing a status in which a user wears the electronic apparatus.

[0010] FIG. **3** is an illustration showing an example of the electronic apparatus body attachable to or detachable from eyeglasses.

[0011] FIG. **4** is a block diagram showing an example of a system configuration of the electronic apparatus.

[0012] FIG. **5** is a block diagram showing an example of a functional configuration of the electronic apparatus.

[0013] FIG. **6** is a flowchart showing an example of a processing procedure of the electronic apparatus.

[0014] FIG. **7** is an illustration showing an example of a movement of the user on accepting an operation.

[0015] FIG. **8** is an illustration showing another example of a movement of the user on accepting an operation.

[0016] FIG. **9** is an illustration showing yet another example of a movement of the user on accepting an operation.

DETAILED DESCRIPTION

[0017] Various embodiments will be described hereinafter with reference to the accompanying drawings.

[0018] In general, according to one embodiment, an electronic apparatus includes a camera configured to capture an image, a hardware processor connected to the camera and a display configured to display a cursor in a screen. The hardware processor is configured to acquire the image captured by the camera, the image including user's one hand and an object different from the user's one hand, detect movement of the object on the user's one hand in the acquired image, and move the cursor in response to the detected movement.

[0019] First, an appearance of the electronic apparatus of the embodiment will be explained with reference to FIG. **1**. The electronic apparatus is, for example, a wearable device (head-mounted display) mounted on the user's head. FIG. **1** illustrates an example of implementing the electronic apparatus as an eyeglasses-shaped wearable device (hereinafter explained as an eyeglasses-type wearable device). The electronic apparatus of the present embodiment is implemented as the eyeglasses-type wearable device in the following explanations.

[0020] Of a frame of an eyeglasses shape of the electronic apparatus, a portion supporting the lens is called a front (portion) and a portion including an earmuff other than the front portion is called a temple (portion).

[0021] As shown in FIG. **1**, an electronic apparatus (eyeglasses-type wearable device) **10** includes an electronic apparatus body **11** elongated along the front portion (a right lens portion of the eyeglasses shape) from the temple portion located on a user's right side if the electronic apparatus **10** is worn. The electronic apparatus **10** may include the electronic apparatus body **11** elongated along the front portion from the temple portion located on a user's left side if the electronic apparatus **10** is worn.

[0022] A display **11***a* and a camera **11***b* are built into the electronic apparatus body **11**. The display **11***a* is, for example, a small monitor or the like and displays a screen or the like including various types of information supplied to the user. It is assumed that the display **11***a* is provided at a position so that the user can visually recognize when the user wears the electronic apparatus **10** as shown in FIG. **2**.

[0023] The camera **11***b* is a imaging device capable of capturing images such as a still image, a moving image and the like. The camera **11***b* can capture an image of an object existing in a direction of the line of sight of the user when wearing the electronic apparatus **10** since the camera **11***b* is provided at the position shown in FIG. **1** and FIG. **2**.

[0024] The glasses and the electronic apparatus body **11** are integrated in the electronic apparatus **10** in FIG. **1**, but the electronic apparatus body **11** may be designed to be attachable to or detachable from general-purpose glasses as shown in FIG. **3**.

[0025] In addition, for example, the electronic apparatus body **11** includes a power button or the like for turning on the power of the electronic apparatus **10**, which is not shown in FIG. **1** or the like.

[0026] FIG. **4** shows an example of a system configuration of the electronic apparatus **10**. As shown in FIG. **4**, the electronic apparatus **10** includes a processor **11***c*, a nonvolatile memory **11***d* and a main memory **11***e* in addition to the